

LISTING OF THE CLAIMS:

1. (Previously Presented) An apparatus for optimizing processing of graphics data, the apparatus comprising:

a plurality of logic units, wherein the plurality of logic units are used to perform a graphics operation in which a set of constants is required for the graphics operation;

a first set of connections connecting the plurality of logic units to each other, wherein the first set of connections are used to configure the plurality of logic units to calculate the set of constants; and

a second set of connections connecting the plurality of logic units, wherein the second set of connections configure the plurality of logic units to perform the graphics operation in which the graphics operation using the constants is calculated through the first set of connections.

2. (Currently Amended) ~~The apparatus of claim 1,~~ An apparatus for optimizing processing of graphics data, the apparatus comprising:

a plurality of logic units, wherein the plurality of logic units are used to perform a graphics operation in which a set of constants is required for the graphics operation;

a first set of connections connecting the plurality of logic units to each other, wherein the first set of connections are used to configure the plurality of logic units to calculate the set of constants; and

a second set of connections connecting the plurality of logic units, wherein the second set of connections configure the plurality of logic units to perform the graphics operation in which the graphics operation using the constants is calculated through the first set of connections,

wherein the first set of connections and the second set of connections include common connections.

3. (Original) The apparatus of claim 1, wherein the graphics operation is a generation of a fog factor.

4. (Original) The apparatus of claim 1, wherein the graphics operation is a viewport transformation.
5. (Original) The apparatus of claim 1, wherein the constants are stored in a memory.
6. (Original) The apparatus of claim 1, wherein the constants are stored in a set of registers.
7. (Original) The apparatus of claim 1, wherein the apparatus is a graphics adapter.
8. (Currently Amended) ~~The apparatus of claim 1,~~ An apparatus for optimizing processing of graphics data, the apparatus comprising:
 - a plurality of logic units, wherein the plurality of logic units are used to perform a graphics operation in which a set of constants is required for the graphics operation;
 - a first set of connections connecting the plurality of logic units to each other, wherein the first set of connections are used to configure the plurality of logic units to calculate the set of constants; and
 - a second set of connections connecting the plurality of logic units, wherein the second set of connections configure the plurality of logic units to perform the graphics operation in which the graphics operation using the constants is calculated through the first set of connections,further comprising:
 - a storage unit, wherein the set of constants are stored in the storage unit such that recalculation of the set of constants for subsequent graphics operations is unnecessary until the set of constants change.
9. (Original) The apparatus of claim 8, wherein the storage is a set of registers.

10. (Previously Presented) A graphics pipeline comprising:
an input, wherein the input receives graphics data;
an output, wherein the output transmits processed graphics data; and
a plurality of stages, wherein a first stage within the plurality of stages is connected to the input and a last stage within the plurality of stages is connected to the output, wherein a selected stage within the plurality of stages includes a plurality of modes of operation including:
a first mode of operation in which the selected stage is configured to calculate constants for use in performing a graphics operation; and
a second mode of operation in which the selected stage is configured to perform the graphics operation using the constants calculated through the first mode of operation.
11. (Original) The graphics pipeline of claim 10, wherein the constants are stored in a storage device.
12. (Original) The graphics pipeline of claim 11, wherein the storage device is a set of registers.
13. (Original) The graphics pipeline of claim 10, wherein the selected stage is a fog factor generation unit.
14. (Original) The graphics pipeline of claim 10, wherein the selected stage is a viewport transformation unit.
15. (Original) The graphics pipeline of claim 10, wherein the output is connected to a raster engine.
16. (Original) The graphics pipeline of claim 15, wherein the input is connected to the raster engine.

17. (Original) The graphics pipeline of claim 16, wherein the input and the output are located in a raster interface unit.

18. (Currently Amended) ~~The graphics pipeline of claim 10;~~ A graphics pipeline comprising:

an input, wherein the input receives graphics data;

an output, wherein the output transmits processed graphics data; and

a plurality of stages, wherein a first stage within the plurality of stages is connected to the input and a last stage within the plurality of stages is connected to the output, wherein a selected stage within the plurality of stages includes a plurality of modes of operation including:

a first mode of operation in which the selected stage is configured to calculate constants for use in performing a graphics operation; and

a second mode of operation in which the selected stage is configured to perform the graphics operation using the constants calculated through the first mode of operation,

wherein the selected stage includes comprising:

a storage unit, wherein the constants determined in the first mode of operation are stored in the storage unit such that recalculation of the constants for subsequent performance of the graphics operation is unnecessary until the set of constants change.

19-21. (Canceled)

22. (Previously Presented) A graphics adapter comprising:

an input configured to receive graphics data;

a frame buffer, wherein processed graphics data is stored for display;

a raster engine connected to the input and to the frame buffer, wherein the raster engine rasterizes the processed graphics data for display,

a geometry engine connected to the raster engine, wherein the geometry engine receives graphics data from the raster engine, processes the graphics data to form the processed graphics data, and returns the processed graphics data to the raster engine and wherein the geometry engine includes a set of processing elements in which at least one

processing element within the set of processing elements includes a set of logic units, in which the set of logic units is used to perform an operation on the graphics data using an equation and wherein a portion of the set of logic units is used to calculate at least one constant for the equation used in the operation.

23. (Previously Presented) The graphics adapter of claim 22, wherein the at least one processing element includes a storage to store the constant calculated by the portion of the set of logic units such that recalculation of the at least one constant for additional operations on other graphics data is unnecessary until the at least one constant changes.

24-27. (Canceled)